Fall 9-1-2001

FOR 327.01: Multiple Resource Silviculture

Unknown
University of Montana - Missoula

FORESTRY 347
MULTIPLE RESOURCE SILVICULTURE
Autumn 2001
Course Outline and Reading Assignments*

Lecture/Lab Schedule

Date			Topic	Required Reading
				Expected to be read prior to class period
Week 1				
9/5	W		Introduction, course overview and objectives	
9/5-6		**lab**	No Lab during Week 1	
Part I. Silvics and forest ecology as a basis for silvicultural planning				
Week 2				
9/10	M		Silvics of individual trees	**Chap. 1, Smith et al.****
9/12	W		Shade tolerance, frost tolerance and other key silvical characteristics	***Eres* "Understory tolerance"**
9/12-13		**lab**	Forest Composition and Structure; Measurements Review/Intro - (Pattee Canyton)	**Barnes et al. 1998**
Week 3				
9/17	M		Forest stand dynamics, Interpreting Diameter/Age distributions	**Chap. 2**
9/19	W		Regeneration ecology, Disturbances, Silvicultural systems	**Chap. 7**
9/19-20		**lab**	Stand dynamics; Forest structure evaluation - (Lubrecht Experimental Forest)	
Week 4				
9/24	M		Overview of silvicultural systems	**Chap. 11**
			Stand Assessment; Site quality estimation; Site index problem set	**Chap. 9, pp 235-246.**
9/26	W		Stand density concepts; Natural self-thinning (Stem exclusion)	**Chap. 3 pp 47-60. & Chap. 4**
9/26-27		**lab**	Silvicultural Inventory; Stand Assessment – (Rattlesnake Nat. Rec. Area)	
Part II. Intermediate Stand Treatments				
Week 5				
10/1	M		QUIZ 1 (Covering material through 9/26)	
			Application of thinning; Tree and Stand response to thinning	**Chap. 4**
10/3	W		Commercial thinning methods; Thinning frequency and intensity	**Chap. 5**
10/3-4		**lab**	Mark thinning using stocking guides and crop tree release method - (Lubrecht Exp. Forest)	
Week 6				
10/8	M		Pre-commercial thinning; Release and Improvement cuts	**Chap. 6, p. 131-133, 147-156**
10/10	W		Silvicultural systems - Even-aged methods	**Chap. 12**
			Clearcutting methods and regeneration alternatives	
10/10-11		**lab**	Silviculture on Montana DNRC Lands; Regen cuts and stocking surveys – (Evaro, MT)	
Part III. Management and regeneration of mature forest stands				
Week 7				
10/15	M		Nursery production of planting stock & tree planting	**Chap. 10**
			Tom Corse, Tribal Forestry, Confederated Salish and Kootenai Tribes	
10/17	W		Natural regeneration vs. Planting (artificial regen)	
10/17-18		**lab**	No Labs this week	
Week 8				

10/22 M Seed tree method; Shelterwood method **Chap. 14**
10/24 W **Midterm Exam I** (Covering material through 10/22)
10/24-25 **lab** Thinning as a tool of restoration ecology; Ponderosa Pine

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Part III. Management and regeneration of mature forest stands *(cont.)*

Week 9
10/29 M Silvicultural systems - Uneven-aged methods **Chap. 15**
Single-tree and group selection **"Role of uneven- aged silv.**
10/31 W Quantitative methods of managing Uneven-aged stands **in Ecosystem Mgmt" , Guldin 1996**
10/31-11/1 **lab** Uneven-aged management on the Flathead Indian Reservation – (Arlee, MT).

Week 10
11/5 M Site preparation - Alternative methods **Chap. 8**
11/7 W Methods and effects of herbicide applications **Chap. 6, pp. 133-146.**
11/7-8 **lab** Silvicultural Prescriptions; Modeling effects of management options over time

Week 11
11/12 M **Veterans's Day Holiday**
11/14 W QUIZ 2 (Covering through 11/7)
Introduction to Genetic effects of Silvicultural Systems **"Genetic considerations" Adams et al.**
11/14-15 **lab** To be announced

Week 12
11/19 M Genetic effects of Silvicultural Systems and Methods **"Genetic considerations"**
George Howe, Howe Forest Genetics Consulting (formerly USFS geneticist) **Adams et al.**
11/21 W No Class - Thanksgiving vacation
11/21-22 No Lab - Thanksgiving vacation

Week 13
Part V. Silviculture for Alternative Objectives
11/26 M Group selection - Objectives and Methodology **"Applying group selection" Miller et al. 1995**
11/28 W Silvicultural techniques for maintaining biological diversity **Chap. 20**
11/28-29 **lab** Silvicultural techniques for maintaining biological diversity (cont) **"Forestry for 21st Century"**
(Lab lecture) Strategies at the stand and landscape scales **Kohm & Franklin**

Week 14
12/3 M Management of Whitebark pine in high elevation ecosystems – guest speaker
Cathy Stewart – USFS Ecologist, Lolo National Forest
12/5 W Silvicultural control of damaging agents **Chap. 19**
12/5-6 **lab** Finish Silvicultural Prescriptions

Week 15

12/10 M The role of Silviculture in Ecosystem Management
12/12 W Catch-up lecture
12/12-13 **lab** Review and questions?

Finals Week

F 12/19 **Final Exam** 8:00 - 10:00 a.m., Wednesday, Dec. 19

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